

Quantic™ Evans



HyCap Series Hybrid Capacitors Product Datasheet

08.03.2022

Product Overview

HyCap series capacitors shall be comprised of sintered tantalum anodes and ruthenium oxide coated cathodes operating in aqueous electrolyte. The components shall be confined within a tantalum case, first by a compressed gasket, followed by a hermetically welded glass to metal seal.

HyCap capacitors are designed to operate reliably in extreme shock and vibration environments.

HyCap-HT capacitors are designed for operation in environments of up to 200°C. For extreme shock environments, HyCap-HTX series offer a robust construction in the largest traditional D(T4) case style. Information available upon request.

Electrical Specifications

Rated Voltage Range	10VDC to 150VDC
Capacitance Range	68uF to 2700uF
Capacitance Tolerance	±20%
Life (@85°C)	>2000 hours @ Rated Voltage

Mechanical Specifications

Test	Method	Condition	Remarks
Shock	MIL-STD-202 METHOD 213	D	Tested for 1ms at 500g peak
Vibration	MIL-STD-202 METHOD 204	H	12 sweeps/axis, 80g peak
	MIL-STD-202 METHOD 214	II, Letter K	1.5 hours/axis, 53.8g rms
Moisture Resistance	MIL-STD-202 METHOD 106		6V Polarity

Solderability	To ANSI J-STD-002
Operating Temperature Range	-55°C to +85°C or 125°C with voltage derating (see page 3)
Storage Temperature Range	-62°C to +130°C

Environmental Compliance

HyCap Series are RoHS 9/10 compliant to EU RoHS Directive 2015/863

- The standard terminals are 60/40 SnPb plated Nickel Wire
- RoHS 6/6 compliant Lead free leads available. See part numbering nomenclature for ordering info.

Capacitor Life

HyCap Series capacitors are rated for >2,000 hours at 85°C and rated voltage or 125°C at de-rated voltage. The effective life of a capacitor in a given application is based on the specific operating voltage and average temperature. The rule of thumb says that every 10°C decrease in operating temperature yields approximately 2x the life. Additionally, each 10% de-rate in voltage will yield approximately 2x the life.

HyCap Series Capacitors have an unlimited Shelf life.

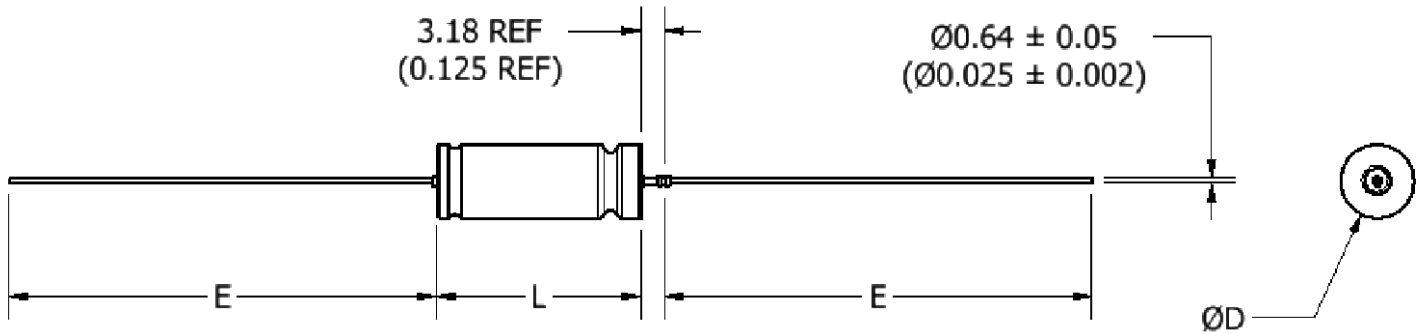
Part Number Description

Product Series	Case Size	Voltage Rating	Cap Rating	HT Series Identifier	Option: ±10% Rating <small>(Standard tolerance ±20%)</small>	Option: Sleeving	Optional: Lead Free
HC#	X	XXX	XXX	HT	K	S	LF

Ratings Table

Part Number	DLA PN	Voltage_85°C	Voltage_125°C	Cap (µF)	ESR (mΩ)	Height (in)	Mass (g)
HCB010102		10	7	1,000	800	0.641	5.5
HC2A075680		75	50	68	2800	0.453	2.25
HC2A100330		100	65	33	3000	0.453	2.25
HC3A100470		100	65	47	2500	0.453	2.25
HC2A125220		125	85	22	3200	0.453	2.25
HCB025561		25	15	560	800	0.641	5.5
HC2B025102	10004-19	25	15	1,000	800	0.641	5.5
HCB050221		50	30	220	900	0.641	5.5
HC2B050471	10004-20	50	30	470	900	0.641	5.5
HC3B050681	10004-25	50	30	680	900	0.641	5.7
HCD050681	93026-40	50	30	680	700	1.062	15
HC2D050152	10004-08	50	30	1,500	450	1.062	15
HC3D050222	10004-15	50	30	2,200	600	1.062	15
HC4D050272		50	30	2,700	800	1.062	15
HC4B050821		50	30	820	800	0.641	5.5
HCB060151	93026-42	60	40	150	1100	0.641	5.5
HC2B060331	10004-21	60	40	330	900	0.641	5.5
HC3B060471	10004-26	60	40	470	1000	0.641	5.7
HC3B060561	10004-27	60	40	560	1000	0.641	5.7
HCD060561	93026-44	60	40	560	800	1.062	15
HC2D060122	10004-16	60	40	1,200	500	1.062	15
HC3D060182	10004-28	60	40	1,800	500	1.062	15
HC4D060222		60	40	2,200	450	1.062	15
HC4B060681		60	40	680	900	0.641	5.7
HCB075111	93026-46	75	50	110	1300	0.641	6
HCD075471	93026-48	75	50	470	900	1.062	15
HC2B075221	10004-22	75	50	220	1000	0.641	5.5
HC3B075331	10004-29	75	50	330	600	0.641	5.7
HC4B075391		75	50	390	600	0.641	5.7
HC2D075941	10004-17	75	50	940	500	1.062	15
HC2D075102		75	50	1,000	350	1.062	15
HC3D075122	10004-30	75	50	1,200	400	1.062	15
HC4D075152		75	50	1,500	600	1.062	15
HCB100680	93026-50	100	65	68	2100	0.641	6
HC2B100151	10004-23	100	65	150	1200	0.641	5.5
HC3B100221		100	65	220	800	0.641	5.7
HC4B100271		100	65	270	1000	0.641	5.7
HCD100221	93026-52	100	65	220	1200	1.062	18
HC2D100471	10004-18	100	65	470	500	1.062	15
HC3D100681		100	65	680	600	1.062	15
HC4D100881		100	65	880	600	1.062	15
HCB125470		125	85	47	2300	0.641	6
HC2B125101		125	85	100	1800	0.641	6
HC3B125151		125	85	150	1000	0.641	5.7
HC4B125181		125	85	180	1500	0.641	5.7
HCD125151	93026-56	125	85	150	1600	1.062	18
HC2D125241	10004-14	125	85	240	800	1.062	18
HC2D125331	10004-24	125	85	330	800	1.062	15
HC3D125471		125	85	470	700	1.062	15
HC4D125561		125	85	560	700	1.062	15
HC2D150151		125	85	150	1800	1.062	15

2D Drawing



Case Size	Dimensions, mm (in)			
	Basic Case		Insulated Case	E ±6.35 (0.250)
	L +0.79 (0.031) -0.41 (0.016)	D ±0.41 (0.016)	D MAX	
A	11.51 (0.453)	4.78 (0.188)	5.56 (0.219)	38.10 (1.500)
B	16.28 (0.641)	7.14 (0.281)	7.92 (0.312)	57.15 (2.250)
D	26.97 (1.062)	9.52 (0.375)	10.31 (0.406)	57.15 (2.250)
A-LF	11.51 (0.453)	4.78 (0.188)	5.56 (0.219)	25.40 (1.000)
B-LF	16.28 (0.641)	7.14 (0.281)	7.92 (0.312)	25.40 (1.000)
D-LF	26.97 (1.062)	9.52 (0.375)	10.31 (0.406)	25.40 (1.000)